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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Yukinori Suda

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YOUNG & THOMPSON
209 Madison Street
Suite 500
ALEXANDRIA, VA 22314

EXAMINER

AHMED, SALMAN

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/506,987	Applicant(s) SUDA, YUKINORI	
	Examiner SALMAN AHMED	Art Unit 2419	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 9/9/2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 9/9/2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>9/9/04, 5/15/06, 11/8/06</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claims 1-26 are pending.

Claims 1-26 are rejected.

Claim Rejections - 35 USC § 101

1. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 25-26 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Regarding Claim 25, the claim is directed a "program" (descriptive material) *per se* as recited in the preamble and is considered non-statutory subject matter. (See MPEP 2106.IV.B.1(a)). Data structures not claimed as embodied in computer-readable media are descriptive material *per se* and are not statutory because they are not capable of causing functional change in the computer. See, e.g., Warmerdam, 33 F.3d at 1361, 31 USPQ2d at 1760 (claim to a data structure *per se* held nonstatutory). Such claimed data structures do not define any structural and functional interrelationships between the data structure and other claimed aspects of the invention, which permit the data structure's functionality to be realized.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-4, 9-12, 17-20, 25 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Davies et al. (EP1124397A2, hereinafter Davies) in view of O'Neill (US PAT PUB 20030193952).

In regards to claim 1, Davies teaches a radio access communication system (Figure 1, system) including a plurality of radio base stations (Figure 1, base stations 103), and a radio terminal (Figure 1, Terminal 101) capable of communicating with radio base stations, system characterized in that: each of plurality of radio base stations has transfer means operative when each radio base station is connected to radio terminal before a handover for changing a radio base station to which radio terminal connects, for transferring information required for a communication with radio terminal to another radio base station to which radio terminal is connected after the handover (paragraphs 0027-0030, if the test result in step 208 is YES, indicating that the first base station has security information available regarding the wireless terminal that can be used by the second base station, control passes to step 221, in which the first base station sends, e.g., on its own accord, the available security information to the second base station, in accordance with the principles of the invention. The sending of such security information

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may be construed at the second base station as a request for a handoff of the wireless terminal from the first base station to the second base station. Advantageously, the second base station, which already trusts the first base station, need not engage in authenticating the wireless terminal with the security center, thus saving considerable time and facilitating the handoff process).

Davies does not explicitly teach transferring communication context.

O'Neill in the same or similar field of endeavor teaches the message 180f can trigger the novel transfer of the MN profile state 165g from the oRN 130 to the nRN 130' and associated context state, this state including the RN-HA150 security association, and the MN-RN security association, that can be re-used at the nRN 130', said context transfer being secured using any type of nRN-nRN security association (paragraph 0111).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate in Davies' system/method the steps of transferring communication context as suggested by O'Neill. The motivation is that such context information is necessary to complete a reliable, seamless and efficient handoff process. Known work in one field of endeavor may prompt variations of it for use in either the same field or a different one based on design incentives or other market forces/market place incentives if the variations are predictable to one of ordinary skill in the art.

In regards to claim 9, Davies teaches a radio base station (Figure 1, base station 103-1) capable of communicating with a radio terminal (Figure 1, Terminal 101),

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characterized in that: radio base station has transfer means operative when radio base station is connected to radio terminal before a handover for changing a connection partner of radio terminal, for transferring information required for a communication with radio terminal to another connection partner of radio terminal after the handover (paragraphs 0027-0030, if the test result in step 208 is YES, indicating that the first base station has security information available regarding the wireless terminal that can be used by the second base station, control passes to step 221, in which the first base station sends, e.g., on its own accord, the available security information to the second base station, in accordance with the principles of the invention. The sending of such security information may be construed at the second base station as a request for a handoff of the wireless terminal from the first base station to the second base station. Advantageously, the second base station, which already trusts the first base station, need not engage in authenticating the wireless terminal with the security center, thus saving considerable time and facilitating the handoff process).

Davies does not explicitly teach transferring communication context.

O'Neill in the same or similar field of endeavor teaches the message 180f can trigger the novel transfer of the MN profile state 165g from the oRN 130 to the nRN 130' and associated context state, this state including the RN-HA150 security association, and the MN-RN security association, that can be re-used at the nRN 130', said context transfer being secured using any type of nRN-nRN security association (paragraph 0111).

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It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate in Davies' system/method the steps of transferring communication context as suggested by O'Neill. The motivation is that such context information is necessary to complete a reliable, seamless and efficient handoff process. Known work in one field of endeavor may prompt variations of it for use in either the same field or a different one based on design incentives or other market forces/market place incentives if the variations are predictable to one of ordinary skill in the art

In regards to claim 17, Davies teaches a handover control method for a radio access communication system (Figure 1, system) including a plurality of radio base stations (Figure 1, base stations 103) and a radio terminal (Figure 1, Terminal 101) capable of communicating with radio base stations, method characterized by comprising the step of providing each of plurality of radio base stations with a step of transferring information required for a communication with radio terminal from a radio base station connected to radio terminal before a handover for changing a radio base station, to which radio terminal connects, to another radio base station to which radio terminal is connected after the handover (paragraphs 0027-0030, if the test result in step 208 is YES, indicating that the first base station has security information available regarding the wireless terminal that can be used by the second base station, control passes to step 221, in which the first base station sends, e.g., on its own accord, the available security information to the second base station, in accordance with the principles of the invention. The sending of such security information may be construed at the second base station as a request for a handoff of the wireless terminal from the first base

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station to the second base station. Advantageously, the second base station, which already trusts the first base station, need not engage in authenticating the wireless terminal with the security center, thus saving considerable time and facilitating the handoff process).

Davies does not explicitly teach transferring communication context.

O'Neill in the same or similar field of endeavor teaches the message 180f can trigger the novel transfer of the MN profile state 165g from the oRN 130 to the nRN 130' and associated context state, this state including the RN-HA150 security association, and the MN-RN security association, that can be re-used at the nRN 130', said context transfer being secured using any type of nRN-nRN security association (paragraph 0111).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate in Davies' system/method the steps of transferring communication context as suggested by O'Neill. The motivation is that such context information is necessary to complete a reliable, seamless and efficient handoff process. Known work in one field of endeavor may prompt variations of it for use in either the same field or a different one based on design incentives or other market forces/market place incentives if the variations are predictable to one of ordinary skill in the art.

In regards to claim 25, Davies teaches a program (paragraph 0011) for causing a computer (Figure 1, base station 103) to execute a handover control method for a radio access communication system (Figure 1, system) including a plurality of radio base

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stations (Figure 1, base stations 103) and a radio terminal (Figure 1, Terminal 101) capable of communicating with radio base stations, program characterized by causing a computer to execute processing for transferring information required for a communication with radio terminal from a radio base station connected to radio terminal before a handover for changing a radio base station, to which radio terminal connects, to another radio base station to which radio terminal is connected after the handover.

Davies does not explicitly teach transferring communication context.

O'Neill in the same or similar field of endeavor teaches the message 180f can trigger the novel transfer of the MN profile state 165g from the oRN 130 to the nRN 130' and associated context state, this state including the RN-HA150 security association, and the MN-RN security association, that can be re-used at the nRN 130', said context transfer being secured using any type of nRN-nRN security association (paragraph 0111).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate in Davies' system/method the steps of transferring communication context as suggested by O'Neill. The motivation is that such context information is necessary to complete a reliable, seamless and efficient handoff process. Known work in one field of endeavor may prompt variations of it for use in either the same field or a different one based on design incentives or other market forces/market place incentives if the variations are predictable to one of ordinary skill in the art.

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In regards to claims 2, 10, 18 and 26 Davies does not explicitly teach communication context comprises a plurality of pieces of context information of different types.

O'Neill in the same or similar field of endeavor teaches communication context comprises a plurality of pieces of context information of different types (paragraph 0111).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate in Davies' system/method the steps of communication context comprises a plurality of pieces of context information of different types as suggested by O'Neill. The motivation is that such context information is necessary to complete a reliable, seamless and efficient handoff process. Known work in one field of endeavor may prompt variations of it for use in either the same field or a different one based on design incentives or other market forces/market place incentives if the variations are predictable to one of ordinary skill in the art

In regards to claim 3, 11 and 19 Davies teaches transfer means is responsive to a request from radio terminal for transferring information to the radio base station to which radio terminal is connected after the handover (paragraph 0027).

Davies does not explicitly teach transferring communication context.

O'Neill in the same or similar field of endeavor teaches the message 180f can trigger the novel transfer of the MN profile state 165g from the oRN 130 to the nRN 130' and associated context state, this state including the RN-HA150 security association,

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and the MN-RN security association, that can be re-used at the nRN 130', said context transfer being secured using any type of nRN-nRN security association (paragraph 0111).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate in Davies' system/method the steps of transferring communication context as suggested by O'Neill. The motivation is that such context information is necessary to complete a reliable, seamless and efficient handoff process. Known work in one field of endeavor may prompt variations of it for use in either the same field or a different one based on design incentives or other market forces/market place incentives if the variations are predictable to one of ordinary skill in the art.

In regards to claims 4, 12 and 20 Davies teaches information is transferred between radio base stations in one of a one-to-one communication or a one-to-multiple communication at the handover of said radio terminal (paragraph 0030).

Davies does not explicitly teach transferring communication context.

O'Neill in the same or similar field of endeavor teaches the message 180f can trigger the novel transfer of the MN profile state 165g from the oRN 130 to the nRN 130' and associated context state, this state including the RN-HA150 security association, and the MN-RN security association, that can be re-used at the nRN 130', said context transfer being secured using any type of nRN-nRN security association (paragraph 0111).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate in Davies' system/method the steps of transferring communication context as suggested by O'Neill. The motivation is that such context information is necessary to complete a reliable, seamless and efficient handoff process. Known work in one field of endeavor may prompt variations of it for use in either the same field or a different one based on design incentives or other market forces/market place incentives if the variations are predictable to one of ordinary skill in the art.

4. Claims 5-7, 13-15 and 21-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Davies and O'Neill as applied to claims 1, 9, 17 and 25 above and further in view of Choi et al. (US PAT PUB 20020051431, hereinafter Choi).

In regards to claim 5, Davies and O'Neill teach communication context comprises a plurality of pieces of context information of different types related to radio terminal all the limitations of claim 1 above.

Davies and O'Neill do not explicitly teach a context information identifier; and context information comprises a sub-context identifier and sub-context information.

Choi in the same field of endeavor teaches a context information identifier; and context information comprises a sub-context identifier and sub-context information (page 11, Table 1, page 12 Table 2 and 3 and page 18 Table 4).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate in Davies and O'Neill's system/method the steps of

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context information identifier; and context information comprises a sub-context identifier and sub-context information as suggested by Choi. The motivation is that such context information i.e. ID, sub-context ID etc. are necessary to complete a reliable, seamless and efficient handoff process. Known work in one field of endeavor may prompt variations of it for use in either the same field or a different one based on design incentives or other market forces/market place incentives if the variations are predictable to one of ordinary skill in the art.

In regards to claim 6, Davies teaches context information includes at least one of terminal capability information indicative of functions of radio terminal, authentication information corresponding to radio terminal (paragraphs 0027-0030), encryption information, communication quality information indicative of a communication service quality, and header compression information utilized when a header of transmission/reception data is compressed.

In regards to claim 7, Davies and O'Neill do not explicitly teach sub-context information includes at least one of data flow identification information, an ensured delay time, a requested delay time, an ensured communication bandwidth, and a requested bandwidth.

Choi in the same field of endeavor teaches sub-context information includes at least one of data flow identification information, an ensured delay time, a requested delay time, an ensured communication bandwidth, and a requested bandwidth (page 11, Table 1, page 12 Table 2 and 3 and page 18 Table 4).

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It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate in Davies and O'Neill's system/method the steps of sub-context information includes at least one of data flow identification information, an ensured delay time, a requested delay time, an ensured communication bandwidth, and a requested bandwidth suggested by Choi. The motivation is that such context information such as data flow identification information is necessary to complete a reliable, seamless and efficient handoff process. Known work in one field of endeavor may prompt variations of it for use in either the same field or a different one based on design incentives or other market forces/market place incentives if the variations are predictable to one of ordinary skill in the art.

Claims 13-15 have similar limitations as claims 5-7 respectively and thus are rejected using same rationale.

Claims 21-23 have similar limitations as claims 5-7 respectively and thus are rejected using same rationale.

5. Claims 8, 16 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Davies, O'Neill and Choi as applied to claims 1, 9 and 17 above and further in view of Suumaki et al. (US PAT 6968190, hereinafter Suumaki).

In regards to claim 8, Davies, O'Neill and Choi teaches all the limitations of claim 5 above.

In regards to claim 8, Davies, O'Neill and Choi do not explicitly teach sub-context information includes at least one of compressed header information, and mask information indicative of a position of a header to be compressed.

Suumaki in the same field of endeavor teaches sub-context information includes at least one of compressed header information, and mask information indicative of a position of a header to be compressed (column 12 lines 20-23).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate in Davies, O'Neill and Choi's system/method the steps of sub-context information includes at least one of compressed header information, and mask information indicative of a position of a header to be compressed as suggested by Suumaki. The motivation is that such context information such as at least one of compressed header information, and mask information indicative of a position of a header to be compressed is necessary to complete a reliable, seamless and efficient handoff process. Known work in one field of endeavor may prompt variations of it for use in either the same field or a different one based on design incentives or other market forces/market place incentives if the variations are predictable to one of ordinary skill in the art.

Claim 16 has similar limitations as claim 8 and thus are rejected using same rationale.

Claim 24 have similar limitations as claim 8 and thus are rejected using same rationale.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SALMAN AHMED whose telephone number is (571)272-8307. The examiner can normally be reached on 9:00 am - 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edan Orgad can be reached on (571) 272-7884. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Salman Ahmed/

Examiner, Art Unit 2419